

TABLE 3.—Maximum free-air wind velocities (m. p. s.), for different sections of the United States based on pilot balloon observations during January 1942

Section	Surface to 2,500 meters (m. s. l.)					Between 2,500 and 5,000 meters (m. s. l.)					Above 5,000 meters (m. s. l.)				
	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station
Northeast ¹	59.0	WSW	1,810	17	Binghamton, N. Y.	55.6	{W WSW	3,700 5,000	7 10	Boston, Mass. Raleigh, N. C.	48.8	W	7,310 7,130	28 6	Caribou, Maine Washington, D. C.
East-Central ²	46.2	WNW	2,500	2	Raleigh, N. C.	61.0	{W WSW	4,700 5,000	2 8	Washington, D. C. Atlanta, Ga.	72.0	W	7,110 11,320	6 11	Greensboro, N. C. Jacksonville, Fla.
South-Central ³	40.2	WNW	1,910	8	Jacksonville, Fla.	40.9	{W WNW	4,700 5,000	2 8	Washington, D. C. Atlanta, Ga.	72.0	W	7,110 11,320	6 11	Greensboro, N. C. Jacksonville, Fla.
North-Central ⁴	56.7	NW	1,970	13	Rapid City, S. Dak.	46.2	{W WNW	4,640 4,150	6 7	Bismarck, N. Dak. Wichita, Kans.	72.0	NW	11,110 9,020	7 5	Huron, S. Dak. Wichita, Kans.
Central ⁵	43.2	WSW	2,370	13	Des Moines, Iowa	66.2	{W WNW	4,150 4,430	7 30	Wichita, Kans. Houston, Tex.	77.2	W	9,020 17,140	5 24	Wichita, Kans. San Antonio, Tex.
South-Central ⁶	35.5	NW	2,500	9	Tulsa, Okla.	48.0	{W WNW	4,430 3,770	30 11	Houston, Tex. Butte, Mont.	78.0	WSW	17,140 10,430	24 29	San Antonio, Tex. Boise, Idaho.
Northwest ⁷	33.2	E	260	13	Tatoosh Island, Wash.	48.0	{W WNW	3,770 4,840	11 6	Butte, Mont. Cheyenne, Wyo.	72.0	NNW	10,430 15,140	29 6	Boise, Idaho. Ely, Nev.
West-Central ⁸	35.4	NE	620	11	Oakland, Calif.	44.0	{W WNW	4,840 4,530	6 3	Cheyenne, Wyo. El Paso, Tex.	70.0	NW	15,140 13,530	6 4	Ely, Nev. Winslow, Ariz.
Southwest ⁹	32.8	SSE	2,040	21	Bakersfield, Calif.	46.0	{W WNW	4,530 4,710	3 3	El Paso, Tex.	68.0	WNW	13,530	4	Winslow, Ariz.

¹ Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania and Northern Ohio.

² Delaware, Maryland, Virginia, West Virginia, Southern Ohio, Kentucky, Eastern Tennessee and North Carolina.

³ South Carolina, Georgia, Florida and Alabama.

⁴ Michigan, Wisconsin, Minnesota, North Dakota and South Dakota.

⁵ Indiana, Illinois, Iowa, Nebraska, Kansas and Missouri.

⁶ Mississippi, Arkansas, Louisiana, Oklahoma, Texas (except El Paso), and western Tennessee.

⁷ Montana, Idaho, Washington and Oregon.

⁸ Wyoming, Colorado, Utah, northern Nevada and northern California.

⁹ Southern California, southern Nevada, Arizona, New Mexico, and extreme west Texas.

RIVER STAGES AND FLOODS

By BENNETT SWENSON

Widespread deficiencies of precipitation marked the month of January 1942. Every State except Florida had below normal precipitation; for the country as a whole, the weighted average precipitation was 1.55 inches, or two-thirds of normal. Floods were few and scattered; light to moderate floods occurring principally in portions of the Southeast and in the Sacramento Valley.

Atlantic Slope drainage.—Portions of the Altamaha River system were in flood at the beginning of the month as the result of heavy rains during the latter part of December. Additional moderate to heavy rains from January 2-4 served to augment the rises. Primary and secondary crests in the Ocmulgee River reached the Altamaha after the crest from the Oconee River, with resultant flood crests of considerable duration throughout the Altamaha, the river at Everett, Ga., being above flood stage from the 4th to the 19th. The total losses from the flooding during the period December 24 to January 19 has been estimated at \$15,600.

Light flooding occurred in the Savannah River at Clio, Ga., with a crest of 8.6 feet on January 4-5. No damage was reported.

Otherwise stages were generally low.

At the end of the month the snow cover was practically absent from the Delaware and Susquehanna River basins, except in the upper portions, southward. The only snow depths of consequence were in the extreme north portions of New York and New England.

East Gulf of Mexico drainage.—River stages had barely begun to subside after the heavy rains in the latter part of December when further heavy rains during the first few days of January caused a second rise in the streams. Flood stages were exceeded in the second rise in the Flint River at Albany, Ga., in the Apalachicola River at Blountstown, Fla., and in the Pearl River at Pearl River, La. Flood losses were slight; the losses in the Pearl River during the period of flooding from December 22 to January 11 was estimated at slightly less than \$8,000.

Ohio River basin.—Stages were generally low throughout the month. In the Allegheny River an ice gorge formed at Parkers Landing, Pa., and held from January 21 to 25. The maximum stage reached at Parkers Landing was 13.5

feet. In the vicinity of Evansville, Ind., there was moderate to heavy ice in the Ohio River between January 6 and 15, resulting in some delay to boat traffic. Floating ice was observed at Cairo, Ill., from the 10th to the 15th.

Mississippi System (except Ohio River).—Ice in the lower Des Moines River broke up toward the close of January and an ice gorge formed in the vicinity of Chillicothe, Iowa, where considerable low land was flooded. At Ottumwa, Iowa, an estimated crest of about 10 feet was reached on the 27th.

In the Missouri River the stage of 1.3 feet at Omaha, Nebr., on January 1, 1942, is the lowest stage of record.

The Mississippi River was highest at the beginning of the month, falling during the first half and rising thereafter. Flood stage was not reached, however, except at Louisiana, Mo., due to the manipulation of Dam No. 24. Floating ice was observed in the main river from the 5th to the 14th in the reach from Cape Girardeau to New Madrid, Mo., and the upper reaches were frozen following severe cold during the first 10 days of the month.

Slight overflows occurred in the White River of Arkansas, in the St. Francis River basin at Manila, Ark., and in the Coldwater River at Coldwater, Miss., during the first half of the month. The North Canadian River at Yukon Okla., remained slightly above flood stage the entire month. No damages were reported from these overflows.

Pacific Slope drainage.—Moderate flooding occurred in the Sacramento River during the latter part of the month. The total damage from this overflow has been estimated at approximately \$115,000.

The flood had its beginning on January 23, when moderate to heavy rains occurred in the morning in the upper Sacramento Valley. During the night of the 23-24th, heavy rains occurred again in the upper Sacramento and light rains in the Feather and American River basins. Heavy rains occurred in the American River basin on the 25th; elsewhere the rains were light or moderate but marked increases in temperature were favorable for snow melt in the higher mountains.

The morning of the 26th brought continued intermittent rain and high temperatures and during the night the passage of a cold front was accompanied by heavy rains over the entire Sacramento Valley. These rains caused a pronounced secondary rise in all of the streams.

At Red Bluff, Calif., the Sacramento River crested at 23.0 feet on the 25th, followed by a higher crest of 23.8 feet on the 27th. The overflow at Fremont Weir reached a peak of 3.9 feet on the 28th. The Sacramento Weir was opened on the 27th when a stage of 28.3 feet was reached at Sacramento. The river receded 0.2 foot following this, rose slightly again but did not reach the previous high stage.

Estimated flood losses and savings for January 1942

River and drainage	Tangible property	Matured crops	Prospective crops	Livestock and other movable farm equipment	Suspension of business	Total losses	Total savings
ATLANTIC SLOPE							
Altamaha River	\$2,800	\$800	\$5,200	\$3,400	\$3,400	\$15,600	\$11,000
<i>East Gulf of Mexico</i>							
Pearl River					7,850	7,850	5,500
PACIFIC SLOPE							
Sacramento River	68,900	6,000	10,000	1,000	29,000	114,900	34,000

FLOOD-STAGE REPORT, JANUARY 1942

[All dates in January unless otherwise specified]

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE					
	<i>Feet</i>			<i>Feet</i>	
Savannah: Clyo, Ga.....	11	(1)	15	15.8	4
Ogeechee: Dover, Ga.....	7	(1)	16	8.6	4-5
Ocmulgee:					
Abbeville, Ga.....	11	(1)	10	13.4	2
Lumber City, Ga.....	15	6	6	15.1	6
Oconee: Mount Vernon, Ga.....	16	(1)	5	17.2	2
Altamaha:					
Charlotte, Ga.....	12	(1)	16	18.9	5
Everett City, Ga.....	10	4	19	12.4	9

See footnotes at end of table.

FLOOD-STAGE REPORT, JANUARY 1942—Continued

[All dates in January unless otherwise specified]

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
EAST GULF OF MEXICO DRAINAGE					
Flint: Albany, Ga.	20	3	5	22.2	5
Apalachicola Blountstown, Fla.	15	(1)	15	19.2	6-7
Pearl: Pearl River, La.	12	(1)	11	14.4	7
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Des Moines: Ottumwa, Iowa	9	27	27	10.0	27
Mississippi: Louisiana, Mo.	12	{ 9	24	12.2	24
		27	28	12.0	27-28
White Basin					
Black: Black Rock, Ariz.	14	1	4	15.4	2
White:					
Georgetown, Ark.	21	1	7	21.7	4
Clarendon, Ark.	26	5	14	26.5	8-12
St. Charles, Ark.	25	11	17	25.3	14
Red Basin					
Sulphur: Ringo Crossing, Tex.	20	31	(4)	22.0	Feb. 1
Arkansas Basin					
North Canadian: Yukon, Okla.	8	(1)	(4)	9.7	8
Lower Mississippi Basin					
Big Lake Outlet: Manila, Ark.	10	5	10	10.3	8
Coldwater: Coldwater, Miss.	13	1	6	14.0	3
PACIFIC SLOPE DRAINAGE					
San Joaquin Basin					
Mokelumne: Bensons Ferry, Calif.	12	28	30	14.7	28
Sacramento Basin					
Sacramento:					
Red Bluff, Calif.	23	{ 25	25	23.0	25
		27	27	23.8	27
Knights Landing, Calif.	30	27	(4)	31.5	28
Columbia Basin					
Long Tom: Monroe, Oreg.	10	{ (1)	2	10.4	Dec. 31
		7	11	12.0	9
		14	21	11.1	15-16
		23	25	10.6	25

¹ Continued from preceeding month.

² Estimated.

³ Due to manipulation of dam No. 24.

⁴ Continued into following month.

⁵ Estimated, gage out.